What is Claimed is:

1. A method of producing a membrane electrode assembly for use in direct methanol fuel cells comprising:

(a) serigraphically printing a cathode carbon backing layer onto graphite or carbon paper;

(b) boiling the printed cathode carbon backing layer and graphite or carbon paper;

(c) serigraphically printing a carbon cathode catalyst onto the boiled, printed carbon backing layer and graphite or carbon paper to produce a cathode layer;

(d) boiling the cathode layer;

(e) serigraphically printing an anode carbon backing layer on graphite or carbon papers;

(f) boiling the printed anode carbon backing layer and graphite or carbon paper;

(g) serigraphically printing a carbon anode catalyst onto the boiled, printed anode carbon backing layer and graphite or carbon paper to produce an anode layer;

(h) boiling the anode layer;

(I) inserting a polymer electrolyte membrane between the boiled cathode layer and boiled anode layer and placing the membrane and cathode and anode layers into a constraint which restricts volume and lateral defamation; and

(j) semi-isostatically compressing the membrane and cathode and anode layers into a membrane electrode assembly.

2. A membrane electrode assembly for use in direct methanol fuel cells produced in accordance with the method of claim 1.